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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT	PAPER NUMBER
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2195

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/756,579

Applicant(s)

REID, JOHN L.

Examiner

Lewis A. Bullock, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over CZAJKOWSKI (U.S. Patent 6,567,974).

As to claim 1, CZAJKOWSKI teaches a method comprising: running at least two applications (applications); and enabling the applications to share a class (application class / system class); and duplicating the member data for the class (see fig. 3-5; col. 10, line 8 – col. 11, line 55; column 12, lines 30-45). CZAJKOWSKI also teaches each application (programs / applications) executes in any type of memory (col. 7, lines 10-13); and providing access (via identity / address of access methods class) to each application to enable each application to access its member data (via each application having access to the instantiated access methods class) (col. 12, lines 35 – col. 13, line 15). Official Notice is taken in that it is well known in the art that shared memory is a type of memory and therefore would be obvious in view of CZAJKOWSKI in order to allow the applications to execute in a shared memory and therein duplicate member data for a class so that the member data is stored in shared memory and accessed by the applications based upon an identifier to the member data for the respective application. It is also well known in the art that when a client instantiates another

class, i.e. access methods class, a reference to that object is returned to the requesting object and therefore the applications would receive a reference to the methods class when it is instantiated for accessing the application's respective member data.

As to claim 2, CZAJOWSKI teaches enabling each application on a computer system to use memory (col. 6, lines 56 – col. 8, line 8) in sharing a class (abstract). CZAJOWSKI also teaches that the memory is representative of various types of possible memory media (col. 7, lines 2-11). However, CZAJOWSKI does not mention that the memory is shared memory.

Official Notice is taken in that shared memory is well known in the art and would be obvious in view of CZAJOWSKI to share a class in shared memory.

As to claim 3, CZAJOWSKI teaches defining an address space (via separate copies of the static field) specific to each application (col. 12, lines 20-45).

As to claim 4, CZAJKOWSKI teaches duplicating process specific data (static field / static field class) for each application (applications) (col. 12, lines 20-45).

As to claim 5, CZAJKOWSKI teaches automatically (during run-time) duplicating process specific data (static field / static field class) in the address space specific to each application (separate copy of the field for each application) (col. 12, lines 12-45; col. 13, lines 1-6; col. 18, lines 9-12).

As to claim 6, CZAJKOWSKI teaches defining a share class (access methods class / modified original class) and using the share class to execute an instance of a class to share (col. 12, line 20 – col. 13, line 15).

As to claim 7, CZAJKOWSKI teaches invoking a sharable interface of the class (operable functionality of the access methods class) to obtain a handle (identity) (via access methods class being operable to extract the application identity from the current thread through the modified original class) (col. 13, lines 1-15).

As to claims 8, CZAJKOWSKI teaches specifying the handle (identity) to resolve the context (via the access methods class being operable to extract the application identity from the current thread through the modified original class to invoke the correct copy of the static field class) (col. 13, lines 1-15). However, CZAJKOWSKI does not teach that the handle is specified in a method call.

Official Notice is taken in that it is well known in the art that objects and classes communicate with one another through method calls. Therefore, it would be obvious to one skilled in the art to modify the teachings of CZAJKOWSKI with the well known teaching of object oriented communication through method calls in order to retrieve the identity (handle) from a thread object through a method call in order for the objects (thread object / access methods class / modified original class) to communicate with one another.

As to claims 9-16, reference is made to an article that corresponds to the method of claims 1-8 and is therefore met by the rejection of claims 1-8 above.

As to claims 17-20, reference is made to a system that corresponds to the method of claims 1-4 and is therefore met by the rejection of claims 1-4 above.

Response to Arguments

3. Applicant's arguments filed 1/28/05 have been fully considered but they are not persuasive. Applicant argues that the fact applications use shared memory does not teach a reason to use the shared memory to enable applications to share class data and particularly that this could be done by providing handles to those applications to enable them to access the shared data and has requested a reference to show when a client instantiates another class, a reference to that object is returned to the requesting object. The examiner disagrees. Czajkowski teaches that the applications share class data wherein all the applications execute in any type of memory. In addition, Czajkowski teaches that the applications execute within a signal virtual machine (col. 5, lines 11-26). A virtual machine as defined in the art is software that mimics the performance of a hardware device, such as a program that allows applications written for an Intel processor to be run on a Motorola chip. Therefore, the fact that the applications execute on a single instance of a virtual machine, i.e. a shared virtual machine, indicates that the applications execute on shared memory, i.e. the shared

environment of the virtual machine. The examiner has also provided the definition of shared memory from the Microsoft Dictionary, Fourth Edition published 1999 for an example, that shared memory was around at the time of the invention. In the action, the examiner is stating that shared memory is a well-known type of memory. Therefore, the combination teaches that the applications share class data within a shared memory environment since the primary reference already indicates that applications share a class instance by copying its individual attributes within a shared environment.

Regarding the limitation of providing a handle to each application to enable each application to access its member data in the shared memory, the examiner has cited a reference in the last office action, mailed 11/05/2004 of a well-known teaching of when a client has an object created, that a reference is returned to the client of the created object ("Understanding ActiveX and OLE" by Chappell, pgs 58-59). In addition, the examiner is citing another reference, "Object-oriented Software Construction" by Meyer which teaches a client calling a create function that creates an object and associates it with a reference (pg. 74). Both of the cited references teach providing a handle / reference to a client (i.e. an application) to enable the application to access the object's member data (i.e. the object's attributes / methods). Czajkowski invention of allowing applications executing within a single virtual machine to share one or more original classes includes steps of creating a separate corresponding copy of a static fields class which includes instance fields corresponding to the one or more static fields, creating an access methods class to be commonly used by the applications, such that upon invocation by an application of the access methods class invokes a corresponding

applications static fields instance. Czajkowski does not explicitly state that the creation or instantiation of the access methods class / static fields class provides a handle or pointer to the application. The well-known teachings of Chappell and Hoare teaches that a create function returns a pointer to the created object. Therefore, the creation of the access methods class returns a pointer to the applications so that the applications can access the access methods class and thereby their individual copy of static fields within the static fields instance. The examiner is also making Applicant aware that the interpretation of the claims allow for indirect address accessing of the member data, as interpreted by the examiner in the office action, because the claims only indicate that a handle is provided to each application in order for the application to access its member data, i.e. via the access methods class which knows the which static fields instance to invoke. Therefore, the teachings of Czajkowski in combination of the well-known teachings meet the limitations of the claims as disclosed and the rejection is maintained as disclosed above.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the


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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (571) 272-3759. The examiner can normally be reached on Monday-Friday, 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER

April 4, 2005